

Patent claims

1. A process for the drying of polymers containing N
or amino, ammonium or spirobicyclic ammonium
5 groups, comprising cationic N-containing groups,
and suitable counterions, which comprises
continuously drying the gelled and washed polymers
obtained by polymerization, crosslinkage and
optionally alkylation using a gaseous medium under
10 normal pressure or overpressure in a fluidized
bed.
2. The process as claimed in claim 1, wherein the
gaseous medium is heated to 40 to 250°C and
15 injected into a fluidized bed dryer through a
sieve bottom having a directed flow in the dryer
outlet direction.
3. The process as claimed in claim 2, wherein the
20 gaseous medium is injected into the fluidized bed
dryer with a velocity of 0.02 m/sec to 3.5 m/sec.
4. The process as claimed in claim 2, wherein the
polymer gel, which can have up to approximately
25 90% of bound water, is introduced continuously
into the fluidized bed dryer, whereupon owing to
the gaseous medium injected in, loosening of the
moist product and then the formation of a constant
fluidized bed occurs and finally, after a
30 residence time of 5 to 12 h, sufficient dried
polymer gel, which has a water content of 2 to 5%,
is removed continuously from the fluidized bed
dryer such that a constant amount of fluidized bed
remains in the dryer.
- 35 5. The process as claimed in claim 4, wherein the
polymer gel is heated to 60 to 120° C at the dryer
exit.

6. The process as claimed in claim 4, wherein the moist nitrogen waste gas, which has a temperature from 70 to 100°C, is led with any polymer gel fines discharged from the fluidized bed, for the separation of the fine fraction through a filter situated in the dryer or through a cyclone separator having a fine filter connected in series, then led through a condenser, cooled to 5 to 35°C and then heated again to 40 to 250°C with 100% saturation and again led into the fluidized bed dryer.
7. The process as claimed in claim 4, wherein various temperature zones having different gas velocities are established in the dryer.
8. The process as claimed in claim 4, wherein the introduction of the product is carried out via a double pendulum flap, via a nibbler or a static sieve with a rotor.
9. The process as claimed in claim 4, wherein dried product is introduced into the dryer as a base layer.